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The issue of children with visual handicap school matureness as one of inclusion determinants

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Abstract

What should we imagine when we hear the term school matureness? This term contains physical, psychical and social readiness of a child to enter the primary education system. The benchmark for entering is set in the Czech republic by the age of six, when certain criteria are met also by the age of five. In the case of children with visual handicap, the benchmark seems not to be ideal, so we usually talk about the delay of entering the primary education system. If we talk about those children, it is necessary to take into account the full scope of the progress pattern. The most frequent reasons for the delay are for example insufficient work pace, low perception level or intellectual abilities.

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1. Introduction

The issue of **school maturity** is a theme of enormous extent as well as considerable complexity, and it depends on the point of selected view when examining this field. Then it is more effective to clearly determine the boundaries of this term and its specifications.

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Mertin and Gillnerová (2003, p. 219) define school maturity as follows: *“Traditionally, school maturity refers, almost exclusively, to children. Their current cognitive, perceptive social and working maturity/readiness is being examined; their development in the earliest infant stages is being taken into account, as well as their actual health condition, laterality, the various aspects of their verbal communication, graphomotorics, etc. A child with certain parameters is then regarded as mature or ready for commencing school attendance.”*

Bednářová and Šmardová (2011) state that: *“school maturity can be defined as reaching such a stage of development (in the physical, mental, emotional and social spheres) that a child is, without difficulties, capable of taking part in the education process; or at least without major difficulties, and preferably with joy and eagerness.”*

For a long time, the notion of **school readiness** was attached to the term of school maturity. Vágnerová (2000), however, comments on this issue that unlike school maturity, the development of school readiness is, to much greater extent, affected by learning. Kindergartens and family thus play an essential role here.

Zelinková (2001, p. 111) defines school readiness in the following way: *“the notion of school readiness (competency) refers to more than biological maturing, to the level of pre-school preparation in terms of the child’s abilities, the influence of the environment and the family upbringing.”*

According to the authors Bednářová and Šmardová (2011), school readiness in principle encompasses competencies in the cognitive, emotional, social, working and somatic fields acquired and developed by the child through learning and social experience, especially in the kindergarten.

Růžicková (in Finková, Růžicková and Stejskalová, 2011) mentions the findings of Zelinková (2001) in relation to the terms and definition of both – school maturity as well as school readiness. *“We consider the term school competency as a suitable superior concept of school maturity and school readiness, which encompasses all requirements for the future first-class pupil from the psychological, medical, pedagogical and special-needs education point of view. The term is also fully acceptable for the purpose of the special-needs educators.”*

What is important then? Regarding the issue of both “school maturity” and “school readiness”, it is necessary to direct our attention to all aspects associated with the child’s development, whereas a substantial role is played by the involvement of the family and the pre-school facility. Cooperation between these two subjects is always required, together with communication, respect towards the activities of the other party (both from parents towards the kindergarten and vice versa) and mutual support. Effective interaction between the two parties has, among others, also a preventive character when it allows for partial elimination of the chances of school failure in the following period and also for enhancing the quality of life for the child’s future Růžicková (2011).

Further, we intend to tackle the issue of the correlation between school maturity and inclusion. This relation is evident from the point of view of incorporating a child into one of the educational trends in the Czech Republic, which significantly differs from the main stream. Here, we either speak of “special-needs” education or, on the contrary, of the so-called “inclusion”. This decision is made by the parents just at the moment of registering the child to compulsory school attendance. The level of the child’s school maturity is thus often one of the most crucial arguments for enrolling the child in a standard school, or, on the contrary, in a school specialised in children with certain impairments. A significant role is also played by the fact that whether the commencement of the child’s school was already deferred by one year or not.

Inclusion can be defined in the following way. Etymologically, the notion inclusion can be derived from the Latin word “inclusion”, which means a process of including or incorporating something within a whole. In case of people with specific needs, inclusion is associated mainly with the field of education, or possibly with socialization, i.e. social inclusion. Inclusion is interpreted as a condition when a person with a handicap is born into a society, which accepts dissimilarities and finds being different as normal. Inclusion is based on the acceptance of dissimilarities, whether it is gender, race, nationality, social background or a health condition. In accepting a child with impaired vision and incorporating it to a common education system, it is more accurate to speak of a form of integration than inclusion. Nevertheless, in a certain form and in respect to the society development and current tendencies, our society is advancing closer to near actual inclusion more than ever

before. Inclusive education means arranging a standard school in such a way that it can facilitate adequate education to all children, regardless of their individual differences, the requirements for special needs and the resulting performances.

2. Diagnostic process focused on school maturity in children with visual impairment

Evaluating school maturity (and readiness) is an act of gathering information on the entire development of the child towards enrolment in compulsory school attendance. At present, assessing school maturity is most often carried out at the following stages: **evaluation at enrolment in the first class, evaluation at the school-consultancy facility** (mainly special-needs education centres or educational-psychological consultancies). However, a third subject - the **kindergarten** - may enter into this equation.

From the point of view of prompt intervention, finding the shortcomings in school maturity during enrolment in the school is rather belated. However, it is not rare that an educator discovers certain handicaps in children only at enrolment to school and only then recommends them for detailed examination in one of the school-consultancy facilities.

In case of children with visual impairment, the standard practice is that these children are enlisted in the records of the school-consultancy facilities, the special-needs education centres for the visual impaired, where each respective child is long-term monitored and the diagnostics pertaining to school maturity is then automatically conducted from the perspective of special-needs education and psychology.

The third possibility of how to diagnose school maturity is through the kindergarten teachers. This method of monitoring the child is rather marginal, but it can indicate a lot about the child and his/her prerequisites for school maturity and readiness. The outputs generated from a kindergarten teacher can be used for various purposes:

- The teacher can use this diagnostic tool as a benchmark for his/her own work, further on how to work with the child, what to develop towards the child's school readiness, etc.
- The outputs can serve for the teacher as a basis for recommendations to the parents, as to how to work with the child in the domestic environment.
- This diagnostic tool can be also used as an underlying material for further examination at a school-consultancy facility, in terms of diagnosing school maturity both from a psychologist and a special-needs educator.

In our text, we aim to focus more on the issue of diagnosing school maturity by a kindergarten teacher.

2.1. Conditions of the diagnostic process carried out by a kindergarten teacher

The diagnostic process in kindergartens tends to be related to and construed as a form of a continual diagnostics when a child is evaluated regularly in the course of the entire kindergarten attendance, i.e. 1-4 years. The child's development within the kindergarten focuses on a single aim – to prepare the child for primary school attendance, naturally taking into account the developmental specifics of each individual. The teacher knows the child well, the child knows the teacher and the environment and that is why, also from the point of view of the diagnosing school maturity, we prefer to conduct the examination in conditions that are relatively amicable and natural to the child. Diagnostics in kindergarten is favourable also due to the fact that the performance of a child coming to a school consultancy facility only a few times may be hindered by the rather unknown environment and the hitherto “unknown” people who are expecting to see a certain accomplishment at a certain given moment.

Another argument supporting our attempt at conducting the diagnostics in kindergartens results from the **teacher's profile** and the competencies, when it is obvious that a teacher should be capable of conducting the diagnostics. A teacher's profile includes, according to Průcha (1997), four fundamental moduli relating to

profession/subject, teaching/psychology, and the general and practical competencies moduli. According to Spilková (in Nezvalová, 1998), the following teacher's **competencies** can be subsequently deduced - competencies relating to profession/subject, psycho-didactic, communicative, organizational and managerial, **diagnostic competencies**, interventional and consulting competencies and the ability of reflection on one's own activities. We assume then that a kindergarten teacher is not only able to use this diagnostic tool for assessing school maturity but also to evaluate the results for his/her needs.

What do we stem from? For the purpose and possibilities to conduct the diagnostics of school maturity in a kindergarten, we apply the general well-established diagnostic tools. In general, these methods include: **anamnesis or history taking, dialogue, tests, and the analyses of activity results**. In terms of a concrete diagnostic approach, we focus on the following fields: **motorics, perception, communication, mental powers, laterality, spatial and time orientation, social factors, psychical and physical characteristics, behaviour, and the level of abilities and skills**.

In this respect, there exist many standardized as well as non-standardized diagnostics tools, which are, however, usually applied separately. Due to effectiveness and for the purpose of basic orientation of a kindergarten teacher, **it would be suitable to use only one time-undemanding diagnostic tool**. This diagnostic tool should be designed to include all basic fields necessary to monitor children, to be brief and it should be possible to interrupt the process due to the child's needs. We find it also necessary to abide by the rules of visual hygiene during conducting the diagnostics in children with visual impairment. Another important factor is the creation of such a diagnostic tool, the results of which might be applicable both for a special-needs kindergarten teacher for visually impaired children and for a standard teacher from the kindergarten where the child is integrated.

3. Screening of school maturity in short-sighted children

The issue of school maturity from the special-needs-education point of view is one of the project inputs, which the authors are working on at the moment. This project is called "Initiatory analysis of the conditions for inclusion of people with specific needs", which is solved within the student's grant competition at the Palacký University in Olomouc (Czech Republic) PdF_2013_016.

One of the objectives of the project was to design and verify the diagnostic tool (screening), which would correspond with the needs of kindergarten teachers and with the conditions mentioned above. Further on, we are going to speak of screening. This **screening** is designed as a fundamental orientation (exploratory) tool, which should indicate to a kindergarten teacher whether the short-sighted child appears to be mature for entry to compulsory school attendance or not.

3.1 Definition of procedures and methodology

In principle, the authors followed their studies of professional literature relating to the diagnosis of school maturity in children. Further on, the issue was consulted with a psychologist and a special-needs educator operating in a special-needs-education centre for visually impaired children. At first, it was ascertained which diagnostic tools (standardized as well as non-standardized tests, clinical methods, development scales, etc.) are available for examining school maturity. School consultancy facilities carry out the diagnosis from a complex point of view, i.e. they apply more diagnostic tools as per need. The application of this practice is not suitable for kindergartens, both for time and professional reasons. Consequently, a complex **screening** was designed as a fundamental orientation (exploratory) tool.

From the methodological viewpoint, this can be classified as a qualitative research. We regard the following **definition of qualitative research** by Švaříček, Šedřová and coll. (2007, s. 24) as befitting: "*The substance of the*

qualitative research is a wide-spread gathering of data without determining the basic variables at the beginning. Similarly, no hypotheses are set in advance and the research project is not dependent on the theory established prior to the research. The aim is to investigate, in detail and in relevant context, a certain loosely defined phenomenon and to present the maximum amount of the collected information. The logics of the qualitative research are inductive; only after gathering a sufficient amount of information can the researcher begin to search for regularities, conceive the preliminary conclusions and only then look for further arguments supporting these conclusions from the data". The output is seen, by the authors, in a newly formulated hypothesis or theory. They continue to quote Strauss and Corbin (1999) that the methods of qualitative approach are applied for discovering and understanding the very substance of phenomena still rather obscure for us so far. Simultaneously, the method might also uncover some new views on the phenomena apparently well-known to us. By a definition derived from empirical medicine, which works with this term, **screening** can be specified as a method of detecting the early forms of disorders or deviations from the standards within a certain population through tests. *Slovník cizích slov.net*, [on line]. [cit. 12.5.2013] Available from: <http://www.slovník-cizich-slov.net/screening-skrinyng/>

In medical interpretation, screenings play an important role especially in prophylactic medicine and are a part of the routine medical examination. Medical screening brings about two advantages – an impulse to a change and early discovery. For the purpose of this work, it is possible to find an analogy with defining the term screening. **It is a method of finding children who are not mature enough to commence compulsory school attendance and thus differ from majority population of children at the given age range.** On the basis of the conducted screening, parents as well as educators acquire information revealing the pending risk of failure in school performances and, at the same time, the fields where the risks occur are indicated.

In the course of creating the screening itself, we took into consideration the need to embrace the following fundamental fields to be monitored in a child:

- **Maturity level of cognitive functions:** here, we focused on evaluating the motoric, perceptive and communicational levels. Pre-mathematic images were also assessed.
- **Monitoring of ability to work (working prerequisites and habits)** concentrated on measuring attention and evaluating working maturity.
- **Maturity level of the personality (emotional-social maturity)** required targeting the evaluation of the emotional and social maturity.
- **Evaluation of the somatic development and the health condition** was focused, above all, to the specification of the diagnosis and the related aspects.
- **Evaluation of laterality** in terms of focusing on the phenotype.
- **Evaluation of mental powers** subjected to examination, e.g. ability to differentiate objects by certain criteria, generalization of the findings and mental processes.
- **Evaluation of memory** measured the skill to memorize intentionally, endurance, etc.
- **Evaluation of the self-service level.** In the given case, it was necessary to monitor self-service activities in every-day life.

Certain parts of the screening were adjusted to the needs of the short-sighted children – e.g. pictures respecting principles of eye hygiene (first of all, requirements for clear contrast); the picture size was also taken into account. It was, however, possible to use standard sizes providing that the child can use, e.g. table camera magnifying glass.

Among others, the research focused on verifying the possibilities to apply screening in short-sighted children. Prior to the core research, the authors themselves conducted pre-research using the compiled screening and based on the ascertained data, individual **case studies** of tested children were elaborated.

A case study is defined by Průcha, Walterová and Mareš (2001, p. 104) as follows: “*a research method in the empirical education research when the examination is subject to the individual case (e.g. pupil, small group of*

pupils, individual class, school, etc.), described in detail and explained thoroughly to such an extent, which is not possible to achieve in collective gathering. The advantage of this method is the possibility of deeper knowledge of the substance of the case; the disadvantage is the limitations in generalizing the outputs”.

It can be added that the adjective “*empiric*” stands for the basic needs of the case study based on the collection of real facts related to the research object. According to Yin in (Švaříček, Šedřová and coll., 2007), a case study is considered to be a comprehensive strategy of the scientific research, which shows certain characteristics, such as:

- The case as a subject of the research of the case study is an integrated system with defined borderlines (spatial as well as time limits),
- Investigation of the basic phenomenon is always done in real context and under conditions as close to natural occurrence of the phenomenon as possible,
- All available sources and methods of data gathering are applied in order to acquire the relevant information.

In the case of this research, the **case study is focused on children with short-sightedness in the diagnostic process aimed at determining school maturity**. The individual above-mentioned characteristics are fulfilled as follows:

- Within the framework of the case study, children with short-sightedness were examined in a specific time span of 4 hours/1 child in the period from January to June 2013. The selection of children was targeted, the fundamental criterion is the level of the visual impairment “short-sightedness” and also that the children be born between 01.09.2005 and 31.08.2007, who will commence (or should commence) compulsory school attendance on 01.09.2013 according to the valid legislation of the Czech Republic.
- Examination is conducted in conditions that are very natural for children, i.e. the kindergarten they regularly attend.
- Relevant data is obtained from several available sources, such as screening and its evaluation, child monitoring and the study of the child’s documentation presented in the form of casuistry (form of a case study).

Our research objective focuses on examining several cases with the aim to verify the applicability of screening in short-sighted children and gathering the necessary underlying material confirming or contradicting the usability and needfulness of the compiled screening.

4. Pre-research and its results

Pre-research was conducted mainly in Moravia (Eastern part of the Czech Republic) located in the former district of Olomouc on the grounds of good accessibility and satisfactory long-term cooperation with the Special-Needs Centre for visually impaired children in the given region, and in Prague (the capital of the Czech Republic). 10 children took part in the pre-research. **The basic research investigations** shall be conducted in the following period at various locations all over the Czech Republic, depending on the possibilities and the availability of individual children recommended by particular special-needs centres for the visually impaired.

The selection of children was targeted, the basic criterion being the level of the visual impairment “short-sightedness”. All children were born between 01.09.2005 and 31.08.2007 who will commence (or should commence) compulsory school attendance on 01.09.2013, according to the valid legislation of the Czech Republic.

The research was conducted in natural conditions well-known to the children – in their respective kindergartens.

Table 1. Case study 1. Girl K. J., 5 years and 6 months, (severe short-sightedness, cortical blindness, hydrocephalus)

Field of fine and rough motorics	
Rough motorics	Within standards
Fine motorics	Shortcomings in the field of fine motorics, lack of skills when working with small objects, cutting, etc.
Field of graphomotorics	Difficulties with gripping the pencil. Difficulties in painting: drawing a human figure is at infantile level, the picture is still missing significant details. So far, she is not able to draw a circle, a straight line, she has difficulties in copying a group of dots (difficulties with a single dot as well).
Laterality	Phenotype: the girl is left-handed.
Perception	
Visual perception	With respect to her diagnosis, certain problems with distinguishing colours (similar in shades) may occur occasionally.
Acoustic perception	Within standards
Speech and skill to express oneself	
Contextual side of speech	Within standards
Formal side of speech	Within standards, only pronunciation of “r and ř” is disturbed
Mental power	Minor shortcomings in the field of general knowledge in relation to acts, objects and the Nature.
Attention	She can keep her attention focus for a limited period of time. Concentration of her attention depends more on the task to be done.
Memory	Minor disproportions occur.
Pre-mathematical images	She is not mature in this field. She needs to be trained with illustrative objects. The activity has to be changed frequently!
Emotional maturity	She finds it occasionally difficult to postpone fulfilment of her wishes. She is sometimes impatient.
Social maturity	Within standards
Self-service skills	Within standards
Working maturity	She manages to fulfil the submitted tasks, respects the work routine, but only under the guidance of a suitable educator.
<p>The girl was born prematurely in the 7th month of pregnancy. She is a twin. At present, she attends kindergarten. She is allocated to a group of children with diagnosis of autism, mental retardation and ADHD.</p> <p>Examination results by applying screening:</p> <p>With respect to the above-stated outputs, the girl is recommended to practise exercises for developing fine motorics so that she is, in case of further deterioration of her visual impairment, able to use the braille alphabet and to orientate herself in micro-space. Difficulties in graphomotorics may, in the future, lead to problems in the practice of writing skills. On-going speech therapy is required. Intentional attention is, for the time being, rather short and does not correspond with the average for this age group. Frequent motivation to work is necessary. She is not mature in the field of pre-mathematical images. Certain problems occur with being patient; she does not accept</p>	

putting off satisfying her needs. She is within standards in the fields of social maturity and self-service. Occasional supervision and regulation from a teacher is required in the field of work maturity.

Taking into account the diagnosis, the age and the examination results, it is recommended to defer regular attendance due to the overall immaturity of the girl. It might be desirable to change the kindergarten or, at least, the class. The class the girl attends is not an impulse or interesting for her any more. There exists a likely relation between the general immaturity of the girl and the uninspiring and un-motivating environment of the kindergarten class. Deferring school commencement by one year and changing the kindergarten should allow her a satisfactory start to compulsory school attendance.

Conclusion

The study brings a view of a specific issue of diagnosing school maturity in short-sighted children. The objective of the study was to show that even a kindergarten teacher is competent enough to carry out the diagnosis and is able to draw general conclusions from the research outputs, which is important for the educator as well as for the child's parents. The created screening serves then as a fundamental tool indicating to the people involved whether the child is ready for compulsory school attendance or not. The application of screening and its results was demonstrated in the brief case study of a girl. With respect to her diagnosis and the examination results through screening, it is evident that the girl requires a one-year deferral of compulsory school attendance. In the future, it might be, however, possible to consider inclusion of the girl, owing to her abilities and the absence of mental retardation. In a year's time, the girl will undertake another control examination at the school consultancy facility and, based on the acquired results and subsequent discussion with her parents, a suitable form of school education will be devised. In the Czech Republic, it is always up to the child's parents to make the final decision.

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